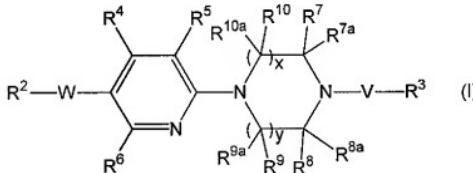


AMENDMENTS TO THE CLAIMS

Please amend the claims as follows.

1. (Currently Amended) A method of inhibiting human stearoyl-CoA desaturase (hSCD) activity comprising contacting a source of hSCD with a compound of formula (I):



wherein:

x and y are each independently 1;

W is $-\text{O}-$, $-\text{N}(\text{R}^1)-$, $-\text{C}(\text{R}^4)_2-$, $-\text{C}(\text{O})-$, $-\text{OC}(\text{O})-$, $-\text{S}(\text{O})-$; (where t is 0, 1 or 2), $-\text{N}(\text{R}^1)\text{S}(\text{O})-$, (where t is 1 or 2), $-\text{S}(\text{O})_t\text{N}(\text{R}^1)-$, $-\text{C}(\text{O})\text{N}(\text{R}^1)-$, $-\text{C}(\text{S})\text{N}(\text{R}^1)-$, $-\text{OS}(\text{O})_t\text{N}(\text{R}^1)-$, $-\text{OC}(\text{O})\text{N}(\text{R}^1)-$, $-\text{OC}(\text{S})\text{N}(\text{R}^1)-$, $-\text{N}(\text{R}^1)\text{C}(\text{O})\text{N}(\text{R}^1)-$ or $-\text{N}(\text{R}^1)\text{C}(\text{S})\text{N}(\text{R}^1)-$;

V is $-\text{C}(\text{O})-$, $-\text{C}(\text{S})-$, $-\text{C}(\text{O})\text{N}(\text{R}^4)-$, $-\text{C}(\text{O})\text{O}-$, $-\text{C}(\text{S})\text{O}-$, $-\text{S}(\text{O})-$ (where t is 1 or 2), $-\text{S}(\text{O})_t\text{N}(\text{R}^1)-$ (where t is 1 or 2) or $-\text{C}(\text{R}^4)\text{H}$;

each R^1 is independently selected from the group consisting of hydrogen, $\text{C}_1\text{-C}_{12}\text{alkyl}$, $\text{C}_2\text{-C}_{12}\text{hydroxyalkyl}$, $\text{C}_4\text{-C}_{12}\text{cycloalkylalkyl}$ and $\text{C}_7\text{-C}_{19}\text{aralkyl}$;

R^2 is selected from the group consisting of $\text{C}_1\text{-C}_{12}\text{alkyl}$, $\text{C}_2\text{-C}_{12}\text{alkenyl}$, $\text{C}_2\text{-C}_{12}\text{hydroxyalkyl}$, $\text{C}_2\text{-C}_{12}\text{hydroxyalkenyl}$, $\text{C}_2\text{-C}_{12}\text{alkoxyalkyl}$, $\text{C}_3\text{-C}_{12}\text{cycloalkyl}$, $\text{C}_4\text{-C}_{12}\text{cycloalkylalkyl}$, aryl, $\text{C}_7\text{-C}_{19}\text{aralkyl}$, $\text{C}_3\text{-C}_{12}\text{heterocycl}$, $\text{C}_3\text{-C}_{12}\text{heterocyclalkyl}$, $\text{C}_1\text{-C}_{12}\text{heteroaryl}$, and $\text{C}_3\text{-C}_{12}\text{heteroarylalkyl}$;

or R^2 is a multi-ring structure having 2 to 4 rings wherein the rings are independently selected from the group consisting of cycloalkyl, heterocycl, aryl and heteroaryl and where some or all of the rings may be fused to each other;

R^3 is phenyl or naphthalene selected from the group consisting of $\text{C}_4\text{-C}_{12}\text{alkyl}$, $\text{C}_2\text{-C}_{12}\text{alkenyl}$, $\text{C}_2\text{-C}_{12}\text{hydroxyalkyl}$, $\text{C}_2\text{-C}_{12}\text{hydroxyalkenyl}$, $\text{C}_2\text{-C}_{12}\text{alkoxyalkyl}$, $\text{C}_3\text{-C}_{12}\text{cycloalkyl}$, $\text{C}_4\text{-C}_{12}\text{cycloalkylalkyl}$, aryl, $\text{C}_7\text{-C}_{19}\text{aralkyl}$, $\text{C}_3\text{-C}_{12}\text{heterocycl}$, $\text{C}_3\text{-C}_{12}\text{heterocyclalkyl}$, $\text{C}_1\text{-C}_{12}\text{heteroaryl}$ and $\text{C}_3\text{-C}_{12}\text{heteroarylalkyl}$;

or R³ is a multi-ring structure having 2 to 4 rings wherein the rings are independently selected from the group consisting of cycloalkyl, heterocyclyl, aryl and heteroaryl and where some or all of the rings may be fused to each other;

R⁴, R⁵ and R⁶ are each independently selected from hydrogen, bromo, fluoro, chloro, methyl, methoxy, trifluoromethyl, cyano, nitro or -N(R¹³)₂;

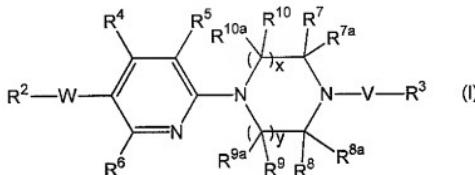
R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰, and R^{10a} are each independently selected from hydrogen or C₁-C₃alkyl;

R¹⁴ is hydrogen or C₁-C₃alkyl; and

each R¹³ is independently selected from hydrogen or C₁-C₆alkyl;

a stereoisomer, enantiomer or tautomer thereof, a pharmaceutically acceptable salt thereof, a pharmaceutical composition thereof or a prodrug thereof.

2. (Currently Amended) A method of treating a disease or condition mediated by stearoyl-CoA desaturase (SCD) in a mammal, wherein the method comprises administering to the mammal in need thereof a therapeutically effective amount of a compound of formula (I):



wherein:

x and y are each independently 1;

W is -O-, -N(R¹), -C(R¹)₂, -C(O)-, -OC(O)-, -S(O)-; (where t is 0, 1 or 2), -N(R¹)S(O)-, (where t is 1 or 2), -S(O)₂N(R¹), -C(O)N(R¹), -C(S)N(R¹), -OS(O)₂N(R¹), -OC(O)N(R¹), -OC(S)N(R¹), -N(R¹)C(O)N(R¹)- or -N(R¹)C(S)N(R¹);
V is -C(O)-, -C(S)-, -C(O)N(R^t), -C(S)N(R^t), -C(O)O-, -C(S)O-, -S(O)- (where t is 1 or 2), -S(O)N(R¹) (where t is 1 or 2) or -C(R¹⁴)H;

each R¹ is independently selected from the group consisting of hydrogen, C₁-C₁₂alkyl, C₂-C₁₂hydroxyalkyl, C₄-C₁₂cycloalkylalkyl and C₇-C₁₉aralkyl;

R² is selected from the group consisting of C₁-C₁₂alkyl, C₂-C₁₂alkenyl, C₂-C₁₂hydroxyalkyl, C₂-C₁₂hydroxyalkenyl, C₂-C₁₂alkoxyalkyl, C₃-C₁₂cycloalkyl,

C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂heterocyclyl, C₃-C₁₂heterocyclylalkyl, C₁-C₁₂heteroaryl, and C₃-C₁₂heteroarylalkyl;

or R² is a multi-ring structure having 2 to 4 rings wherein the rings are independently selected from the group consisting of cycloalkyl, heterocyclyl, aryl and heteroaryl and where some or all of the rings may be fused to each other;

R³ is phenyl or naphthalene selected from the group consisting of C₁-C₄alkyl, C₂-C₁₂alkenyl, C₂-C₁₂hydroxymethyl, C₂-C₁₂hydroxymethoxy, C₂-C₁₂alkoxymethyl, C₂-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂heterocyclyl, C₃-C₁₂heterocyclylalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl;

or R³ is a multi-ring structure having 2 to 4 rings wherein the rings are independently selected from the group consisting of cycloalkyl, heterocyclyl, aryl and heteroaryl and where some or all of the rings may be fused to each other;

R⁴, R⁵ and R⁶ are each independently selected from hydrogen, bromo, fluoro, chloro, methyl, methoxy, trifluoromethyl, cyano, nitro or -N(R¹³)₂;

R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰, and R^{10a} are each independently selected from hydrogen or C₁-C₃alkyl;

R¹⁴ is hydrogen or C₁-C₃alkyl; and

each R¹³ is independently selected from hydrogen or C₁-C₆alkyl;

a stereoisomer, enantiomer or tautomer thereof, a pharmaceutically acceptable salt thereof, a pharmaceutical composition thereof or a prodrug thereof.

3. (Original) The method of Claim 2 wherein the mammal is a human.

4. (Currently Amended) The method of Claim 3 wherein the disease or condition is selected from the group consisting of Type II diabetes, fatty liver, non-alcoholic steatohepatitis, impaired glucose tolerance, insulin resistance, obesity, dyslipidemia, acne, and metabolic syndrome and any combination of these.

5. (Original) The method of Claim 4 wherein the disease or condition is Type II diabetes.

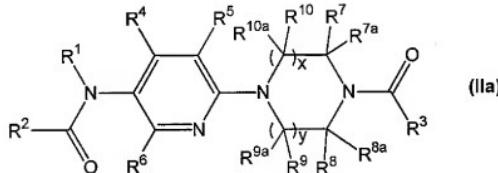
6. (Original) The method of Claim 4 wherein the disease or condition is obesity.

7. (Original) The method of Claim 4 wherein the disease or condition is metabolic syndrome.

8. (Original) The method of Claim 4 wherein the disease or condition is fatty liver.

9. (Original) The method of Claim 4 wherein the disease or condition is non-alcoholic steatohepatitis.

10. (Withdrawn) A compound of formula (IIa):



wherein:

x and y are each independently 1, 2 or 3;

R¹ is selected from the group consisting of hydrogen, C₁-C₁₂alkyl,

C₂-C₁₂hydroxyalkyl, C₄-C₁₂cycloalkylalkyl and C₇-C₁₉aralkyl;

R² is selected from the group consisting of C₇-C₁₂alkyl, C₃-C₁₂alkenyl,

C₇-C₁₂hydroxyalkyl, C₂-C₁₂alkoxyalkyl, C₃-C₁₂hydroxyalkenyl, C₃-C₁₂cycloalkyl,

C₄-C₁₂cycloalkylalkyl, C₁₃-C₁₉aralkyl, C₁-C₁₂heteroaryl, C₃-C₁₂heterocyclalkyl,

C₃-C₁₂heterocycl, and C₃-C₁₂heteroarylalkyl, provided that R² is not pyrazinyl, pyridinonyl,

pyrrolidinonyl or imidazolyl;

or R² is a multi-ring structure having 2 to 4 rings wherein the rings are independently selected from the group consisting of cycloalkyl, heterocycl, aryl and heteroaryl, where some or all of the rings may be fused to each other;

R³ is selected from the group consisting of C₃-C₁₂alkyl, C₃-C₁₂alkenyl,

C₃-C₁₂hydroxyalkyl, C₃-C₁₂hydroxyalkenyl, C₃-C₁₂alkoxyalkyl, C₃-C₁₂cycloalkyl,

C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂heterocycl, C₃-C₁₂heterocyclalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl;

or R³ is a multi-ring structure having 2 to 4 rings wherein the rings are independently selected from the group consisting of cycloalkyl, heterocyclyl, aryl and heteroaryl and where some or all of the rings may be fused to each other;

R⁴, R⁵ and R⁶ are each independently selected from hydrogen, bromo, fluoro, chloro, methyl, methoxy, trifluoromethyl, cyano, nitro or -N(R¹³)₂;

R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰ and R^{10a} are each independently selected from hydrogen or C₁-C₃alkyl;

~~or R⁶ and R^{9a} together, or R¹⁰ and R^{10a} together form an exo-group, while the remaining R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰, and R^{10a} are each independently selected from hydrogen or C₁-C₃alkyl;~~

~~or one of R⁷, R^{7a}, R¹⁰ and R^{10a}, together with one of R⁸, R^{8a}, R⁹ and R^{9a}, form an alkylene bridge, while the remaining R¹⁰, R^{10a}, R⁷, R^{7a}, R⁸, R^{8a}, R⁹ and R^{9a} are each independently selected from hydrogen or C₁-C₃alkyl; and~~

each R¹³ is independently selected from hydrogen or C₁-C₆alkyl;

a stereoisomer, enantiomer or tautomer thereof, a pharmaceutically acceptable salt thereof, a pharmaceutical composition thereof or a prodrug thereof.

11. (Withdrawn) The compound of Claim 10 wherein:

x and y are each independently 1, 2 or 3;

R¹ is selected from the group consisting of hydrogen, C₁-C₁₂alkyl,

C₂-C₁₂hydroxyalkyl, C₄-C₁₂cycloalkylalkyl and C₇-C₁₉aralkyl;

R² is selected from the group consisting of C₇-C₁₂alkyl, C₃-C₁₂alkenyl, C₇-C₁₂hydroxyalkyl, C₂-C₁₂alkoxyalkyl, C₃-C₁₂hydroxyalkenyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, C₁₃-C₁₉aralkyl, C₁-C₁₂heteroaryl, C₃-C₁₂heterocyclalkyl, C₃-C₁₂heterocyclyl and C₃-C₁₂heteroarylalkyl, provided that R² is not pyrazinyl, pyridinonyl, pyrrolidinonyl or imidazolyl;

R³ is selected from the group consisting of C₃-C₁₂alkyl, C₃-C₁₂alkenyl, C₃-C₁₂hydroxyalkyl, C₃-C₁₂hydroxyalkenyl, C₃-C₁₂alkoxyalkyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂heterocyclyl, C₃-C₁₂heterocyclalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl;

R⁴, R⁵ and R⁶ are each independently selected from hydrogen, bromo, fluoro, chloro, methyl, methoxy, trifluoromethyl, cyano, nitro or -N(R¹³)₂;

R^7 , R^{7a} , R^8 , R^{8a} , R^9 , R^{9a} , R^{10} and R^{10a} are each independently selected from hydrogen or C_1 - C_3 alkyl; and
each R^{13} is independently selected from hydrogen or C_1 - C_6 alkyl.

12. (Withdrawn) The compound of Claim 11 wherein:

x and y are each 1;

R^1 is selected from the group consisting of hydrogen or C_1 - C_{12} alkyl;

R^2 is selected from the group consisting of C_7 - C_{12} alkyl, C_3 - C_{12} alkenyl, C_3 - C_{12} heterocyclylalkyl and C_3 - C_{12} heteroarylalkyl;

R^3 is selected from the group consisting of C_3 - C_{12} alkyl, C_3 - C_{12} cycloalkyl, C_4 - C_{12} cycloalkylalkyl, aryl, C_7 - C_{12} aralkyl, C_3 - C_{12} heterocycl, C_3 - C_{12} heterocyclylalkyl, C_1 - C_{12} heteroaryl and C_3 - C_{12} heteroarylalkyl;

R^4 , R^5 and R^6 are each independently selected from hydrogen, bromo, fluoro, chloro, methyl, methoxy, trifluoromethyl, cyano, nitro or $-N(R^{13})_2$;

R^7 , R^{7a} , R^8 , R^{8a} , R^9 , R^{9a} , R^{10} and R^{10a} are each independently selected from hydrogen or C_1 - C_3 alkyl; and

each R^{13} is independently selected from hydrogen or C_1 - C_6 alkyl.

13. (Withdrawn) The compound of Claim 12 wherein:

R^2 is C_3 - C_{12} cycloalkyl or C_4 - C_{12} cycloalkylalkyl;

R^3 is selected from the group consisting of C_3 - C_{12} cycloalkyl or C_4 - C_{12} cycloalkylalkyl;

R^4 , R^5 and R^6 are each hydrogen; and

R^7 , R^{7a} , R^8 , R^{8a} , R^9 , R^{9a} , R^{10} and R^{10a} are each hydrogen or C_1 - C_3 alkyl.

14. (Withdrawn) The compound of Claim 13 wherein:

R^2 is C_3 - C_{12} cycloalkyl; and

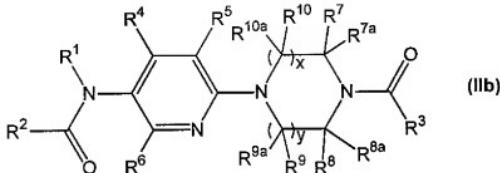
R^3 is C_3 - C_{12} cycloalkyl.

15. (Withdrawn) The compound of Claim 14, namely, Cyclohexanecarboxylic acid [6-(4-cyclohexanecarbonyl-piperazin-1-yl)pyridin-3-yl]amide.

16. (Withdrawn) A method of treating a disease or condition mediated by stearoyl-CoA desaturase (SCD) in a mammal, wherein the method comprises administering to a mammal in need thereof a therapeutically effective amount of a compound of Claim 10.

17. (Withdrawn) A pharmaceutical composition comprising a pharmaceutically acceptable excipient and a therapeutically effective amount of a compound of Claim 10.

18. (Withdrawn) A compound of formula (IIb):



wherein:

x and y are each independently 1, 2 or 3;

R¹ is selected from the group consisting of hydrogen, C₁-C₁₂alkyl, C₂-C₁₂hydroxyalkyl, C₄-C₁₂cycloalkylalkyl and C₇-C₁₉aralkyl;

R² is selected from the group consisting of C₁-C₁₂alkyl, C₂-C₁₂alkenyl, C₂-C₁₂hydroxyalkyl, C₂-C₁₂hydroxyalkenyl, C₁-C₆alkoxy, C₃-C₁₂alkoxymethyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, C₇-C₁₉aralkyl, C₃-C₁₂heterocycl, C₃-C₁₂heterocyclylalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl;

or R² is a multi-ring structure having 2 to 4 rings wherein the rings are independently selected from the group consisting of cycloalkyl, heterocycl, aryl and heteroaryl, where some or all of the rings may be fused to each other;

R³ is phenyl optionally substituted by one or more substituents selected from the group consisting of halo, cyano, nitro, hydroxy, C₁-C₆alkyl, C₁-C₆trihaloalkyl, C₁-C₆trihaloalkoxy, C₁-C₆alkylsulfonyl, -N(R¹²)₂, -OC(O)R¹², -C(O)OR¹², -S(O)₂N(R¹²)₂, cycloalkyl, heterocycl, heteroaryl and heteroarylalkyl, provided that R³ is not phenyl substituted with optionally substituted thiienyl;

R⁴, R⁵ and R⁶ are each independently selected from hydrogen, bromo, fluoro, chloro, methyl, methoxy, trifluoromethyl, cyano, nitro or -N(R¹³)₂;

R^7 , R^{7a} , R^8 , R^{8a} , R^9 , R^{9a} , R^{10} , and R^{10a} are each independently selected from hydrogen or C_1 - C_3 alkyl;

or R^9 and R^{9a} together, or R^{10} and R^{10a} together form an exo-group, while the remaining R^7 , R^{7a} , R^8 , R^{8a} , R^9 , R^{9a} , R^{10} , and R^{10a} are each independently selected from hydrogen or C_1 - C_3 alkyl;

or one of R^7 , R^{7a} , R^{10} and R^{10a} , together with one of R^8 , R^{8a} , R^9 and R^{9a} , form an alkylene bridge, while the remaining R^{10} , R^{10a} , R^7 , R^{7a} , R^8 , R^{8a} , R^9 , and R^{9a} are each independently selected from hydrogen or C_1 - C_3 alkyl; and

each R^{12} is independently selected from hydrogen, C_1 - C_6 alkyl, C_3 - C_6 cycloalkyl, aryl or aralkyl; and

each R^{13} is independently selected from hydrogen or C_1 - C_6 alkyl;

a stereoisomer, enantiomer or tautomer thereof, a pharmaceutically acceptable salt thereof, a pharmaceutical composition thereof or a prodrug thereof.

19. (Withdrawn) The compound of Claim 18 wherein:

x and y are each independently 1, 2 or 3;

R^1 is selected from the group consisting of hydrogen, C_1 - C_{12} alkyl, C_2 - C_{12} hydroxyalkyl, C_4 - C_{12} cycloalkylalkyl and C_7 - C_{19} aralkyl;

R^2 is selected from the group consisting of C_1 - C_{12} alkyl, C_2 - C_{12} alkenyl, C_2 - C_{12} hydroxyalkyl, C_2 - C_{12} hydroxyalkenyl, C_1 - C_6 alkoxy, C_3 - C_{12} alkoxyalkyl, C_3 - C_{12} cycloalkyl, C_4 - C_{12} cycloalkylalkyl, C_7 - C_{19} aralkyl, C_3 - C_{12} heterocycl, C_3 - C_{12} heterocyclylalkyl, C_1 - C_{12} heteroaryl and C_3 - C_{12} heteroarylalkyl;

R^3 is phenyl optionally substituted by one or more substituents selected from the group consisting of halo, cyano, nitro, hydroxy, C_1 - C_6 alkyl, C_1 - C_6 trihaloalkyl, C_1 - C_6 trihaloalkoxy, C_1 - C_6 alkylsulfonyl, $-N(R^{12})_2$, $-OC(O)R^{12}$, $-C(O)OR^{12}$, $-S(O)_2N(R^{12})_2$, cycloalkyl, heterocycl, heteroaryl and heteroarylcycloalkyl, provided that R^3 is not phenyl substituted with optionally substituted thiienyl;

R^4 , R^5 and R^6 are each independently selected from hydrogen, bromo, fluoro, chloro, methyl, methoxy, trifluoromethyl, cyano, nitro or $-N(R^{13})_2$;

R^7 , R^{7a} , R^8 , R^{8a} , R^9 , R^{9a} , R^{10} , and R^{10a} are each independently selected from hydrogen or C_1 - C_3 alkyl, or

R^{10} and R^{10a} together form an oxo group and the remaining R^7 , R^{7a} , R^8 , R^{8a} , R^9 and R^{9a} are each hydrogen;

each R¹² is independently selected from hydrogen, C₁-C₆alkyl, C₃-C₆cycloalkyl, aryl or aralkyl; and

each R¹³ is independently selected from hydrogen or C₁-C₆alkyl.

20. (Withdrawn) The compound of Claim 19 wherein:

x and y are each 1;

R¹ is hydrogen or C₁-C₁₂alkyl;

R² is selected from the group consisting of C₁-C₁₂alkyl, C₂-C₁₂alkenyl,

C₂-C₁₂hydroxyalkyl, C₂-C₁₂hydroxyalkenyl, C₁-C₆alkoxy, C₃-C₁₂alkoxyalkyl, C₃-C₁₂cycloalkyl,

C₄-C₁₂cycloalkylalkyl, C₇-C₁₂aralkyl, C₃-C₁₂heterocycl, C₃-C₁₂heterocyclylalkyl,

C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl;

R³ is phenyl optionally substituted by one or more substituents selected from the group consisting of halo, cyano, nitro, hydroxy, C₁-C₆alkyl, C₁-C₆trihaloalkyl, C₁-C₆trihaloalkoxy, C₁-C₆alkylsulfonyl, -N(R¹²)₂, -OC(O)R¹², -C(O)OR¹², -S(O)₂N(R¹²)₂, cycloalkyl, heterocycl, heteroaryl and heteroarylalkyl, provided that R³ is not phenyl substituted with optionally substituted thiienyl;

R⁴, R⁵ and R⁶ are each hydrogen;

R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰ and R^{10a} are each hydrogen; or

R¹⁰ and R^{10a} together form an oxo group and the remaining R⁷, R^{7a}, R⁸, R^{8a}, R⁹ and R^{9a} are each hydrogen; and

each R¹² is independently selected from hydrogen, C₁-C₆alkyl, C₃-C₆cycloalkyl, aryl or aralkyl.

21. (Withdrawn) The compound of Claim 20 wherein:

R² is C₁-C₁₂alkyl; and

R³ is phenyl optionally substituted by one or more substituents selected from halo, C₁-C₆alkyl, C₁-C₆trihaloalkyl and C₁-C₆trihaloalkoxy.

22. (Withdrawn) The compound of Claim 21 selected from the group consisting of the following:

4-Methylpentanoic acid {6-[4-(2-trifluoromethylbenzoyl)piperazin-1-yl]pyridin-3-yl}amide;

Hexanoic acid {6-[4-(2-trifluoromethylbenzoyl)piperazin-1-yl]pyridin-3-yl}amide;

Heptanoic acid {6-[4-(2-trifluoromethylbenzoyl)piperazin-1-yl]pyridin-3-yl}amide;

Heptanoic acid {6-[4-(2,5-dichlorobenzoyl)piperazin-1-yl]pyridin-3-yl}amide; and
Hexanoic acid {6-[4-(2,5-dichlorobenzoyl)piperazin-1-yl]pyridin-3-yl}amide.

23. (Withdrawn) The compound of Claim 20 wherein:

R² is C₃-C₁₂cycloalkyl; and

R³ is phenyl optionally substituted by one or more substituents selected from halo, C₁-C₆alkyl, C₁-C₆trihaloalkyl and C₁-C₆trihaloalkoxy.

24. (Withdrawn) The compound of Claim 23, namely, Cyclohexanecarboxylic acid {6-[4-(2-trifluoromethylbenzoyl)piperazin-1-yl]pyridin-3-yl}amide.

25. (Withdrawn) The compound of Claim 20 wherein:

R² is C₇-C₁₂aralkyl optionally substituted by one or more substituents selected from halo, C₁-C₆alkyl, C₁-C₆trihaloalkyl and C₁-C₆trihaloalkoxy; and

R³ is phenyl optionally substituted by one or more substituents selected from halo, C₁-C₆alkyl, C₁-C₆trihaloalkyl and C₁-C₆trihaloalkoxy.

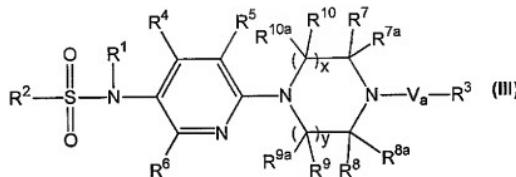
26. (Withdrawn) The compound of Claim 25 selected from the group consisting of the following:

3-Phenyl-N-{6-[4-(2-trifluoromethylbenzoyl)piperazin-1-yl]-pyridin-3-yl}propionamide;
4-Phenyl-N-{6-[4-(2-trifluoromethylbenzoyl)piperazin-1-yl]-pyridin-3-yl}butyramide; and
N-{6-[2-Oxo-4-(2-trifluoromethylbenzoyl)piperazin-1-yl]-pyridin-3-yl}-4-phenylbutyramide.

27. (Withdrawn) A method of treating a disease or condition mediated by stearoyl-CoA desaturase (SCD) in a mammal, wherein the method comprises administering to a mammal in need thereof a therapeutically effective amount of a compound of Claim 18.

28. (Withdrawn) A pharmaceutical composition comprising a pharmaceutically acceptable excipient and a therapeutically effective amount of a compound of Claim 18.

29. (Withdrawn) The compound of formula (III):



wherein:

x and y are each independently 1, 2 or 3;

V_a is -C(O)-, -C(S)-, -C(O)N(R¹)-, -C(S)N(R¹)-, -C(O)O-, -C(S)O-, -S(O)_t- (where t is 1 or 2) or -S(O)_tN(R¹)- (where t is 1 or 2);

each R¹ is independently selected from the group consisting of hydrogen, C₁-C₁₂alkyl, C₂-C₁₂hydroxyalkyl, C₄-C₁₂cycloalkylalkyl and C₇-C₁₉aralkyl;

R² is selected from the group consisting of C₁-C₁₂alkyl, C₂-C₁₂alkenyl, C₂-C₁₂hydroxyalkyl, C₂-C₁₂hydroxyalkenyl, C₁-C₆alkoxy, C₃-C₁₂alkoxyalkyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂heterocyclyl, C₃-C₁₂heterocyclalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl;

or R² is a multi-ring structure having 2 to 4 rings wherein the rings are independently selected from the group consisting of cycloalkyl, heterocyclyl, aryl and heteroaryl, where some or all of the rings may be fused to each other;

R³ is selected from the group consisting of C₁-C₁₂alkyl, C₂-C₁₂alkenyl, C₂-C₁₂hydroxyalkyl, C₂-C₁₂hydroxyalkenyl, C₂-C₁₂alkoxyalkyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂heterocyclyl, C₃-C₁₂heterocyclalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl;

or R³ is a multi-ring structure having 2 to 4 rings wherein the rings are independently selected from the group consisting of cycloalkyl, heterocyclyl, aryl and heteroaryl and where some or all of the rings may be fused to each other;

R⁴, R⁵ and R⁶ are each independently selected from hydrogen, bromo, fluoro, chloro, methyl, methoxy, trifluoromethyl, cyano, nitro or -N(R¹³)₂;

R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰, and R^{10a} are each independently selected from hydrogen or C₁-C₃alkyl;

or R⁷ and R^{7a} together, or R⁸ and R^{8a} together, or R⁹ and R^{9a} together, or R¹⁰ and

R^{10a} together are an exo group, provided that when V_a is $-C(O)-$, R^7 and R^{7a} together or R^6 and R^{8a} together do not form an exo group, while the remaining R^7 , R^{7a} , R^8 , R^{8a} , R^9 , R^{9a} , R^{10} , and R^{10a} are each independently selected from hydrogen or C_1-C_3 alkyl;

or one of R^{10} , R^{10a} , R^7 , and R^{7a} together with one of R^8 , R^{8a} , R^9 and R^{9a} form an alkylene bridge, while the remaining R^{10} , R^{10a} , R^7 , R^{7a} , R^8 , R^{8a} , R^9 , and R^{9a} are each independently selected from hydrogen or C_1-C_3 alkyl; and

each R^{13} is independently selected from hydrogen or C_1-C_6 alkyl;

a stereoisomer, enantiomer or tautomer thereof, a pharmaceutically acceptable salt thereof, a pharmaceutical composition thereof or a prodrug thereof.

30. (Withdrawn) The compound of Claim 29 wherein:

x and y are each independently 1, 2 or 3;

V_a is $-C(O)-$ or $-C(S)-$;

R^1 is selected from the group consisting of hydrogen, C_1-C_{12} alkyl,

C_2-C_{12} hydroxyalkyl, C_4-C_{12} cycloalkylalkyl and C_7-C_{19} aralkyl;

R^2 is selected from the group consisting of C_1-C_{12} alkyl, C_2-C_{12} alkenyl,

C_2-C_{12} hydroxyalkyl, C_2-C_{12} hydroxyalkenyl, C_1-C_6 alkoxy, C_3-C_{12} alkoxylalkyl, C_3-C_{12} cycloalkyl,

C_4-C_{12} cycloalkylalkyl, aryl, C_7-C_{19} aralkyl, C_3-C_{12} heterocyclyl, C_3-C_{12} heterocyclylalkyl,

C_1-C_{12} heteroaryl and C_3-C_{12} heteroarylalkyl;

R^3 is selected from the group consisting of C_1-C_{12} alkyl, C_2-C_{12} alkenyl,

C_2-C_{12} hydroxyalkyl, C_2-C_{12} hydroxyalkenyl, C_2-C_{12} alkoxylalkyl, C_3-C_{12} cycloalkyl,

C_4-C_{12} cycloalkylalkyl, aryl, C_7-C_{19} aralkyl, C_3-C_{12} heterocyclyl, C_3-C_{12} heterocyclylalkyl,

C_1-C_{12} heteroaryl and C_3-C_{12} heteroarylalkyl;

R^4 , R^5 and R^6 are each independently selected from hydrogen, bromo, fluoro, chloro, methyl, methoxy, trifluoromethyl, cyano, nitro or $-N(R^{13})_2$;

R^7 , R^{7a} , R^8 , R^{8a} , R^9 , R^{9a} , R^{10} , and R^{10a} are each independently selected from hydrogen or C_1-C_3 alkyl; and

each R^{13} is independently selected from hydrogen or C_1-C_6 alkyl.

31. (Withdrawn) The compound of Claim 30 wherein:

x and y are each 1;

V_a is $-C(O)-$;

R^1 is hydrogen or C_1-C_{12} alkyl;

R² is selected from the group consisting of C₁-C₁₂alkyl, C₂-C₁₂alkenyl, C₂-C₁₂hydroxyalkyl, C₂-C₁₂hydroxyalkenyl, C₁-C₆alkoxy, C₃-C₁₂alkoxyalkyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₂aralkyl, C₃-C₁₂ heterocyclyl, C₃-C₁₂heterocyclylalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl;

R³ is naphthyl or phenyl, each optionally substituted by one or more substituents selected from the group consisting of halo, cyano, nitro, hydroxy, C₁-C₆alkyl, C₁-C₆trihaloalkyl, C₁-C₆trihaloalkoxy, C₁-C₆alkylsulfonyl, -N(R¹²)₂, -OC(O)R¹², -C(O)OR¹², -S(O)₂N(R¹²)₂, cycloalkyl, heterocyclyl, heteroaryl and heteroaryl(cycloalkyl);

R⁴, R⁵ and R⁶ are each hydrogen;

R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰, and R^{10a} are each hydrogen; and

each R¹² is independently selected from hydrogen, C₁-C₆alkyl, C₃-C₆cycloalkyl, aryl or aralkyl.

32. (Withdrawn) The compound of Claim 31 wherein:

R² is C₁-C₁₂alkyl or C₇-C₁₂aralkyl optionally substituted by one or more substituents selected from the group consisting of halo, C₁-C₆alkyl, C₁-C₆trihaloalkyl and C₁-C₆trihaloalkoxy;

R³ is naphthyl or phenyl, each optionally substituted by one or more substituents selected from the group consisting of halo, C₁-C₆alkyl, C₁-C₆trihaloalkyl and C₁-C₆trihaloalkoxy.

33. (Withdrawn) The compound of Claim 32 selected from the group consisting of the following:

Pentane-1-sulfonic acid {6-[4-(2-trifluoromethylbenzoyl)-piperazin-1-yl]pyridin-3-yl}amide;

Butane-1-sulfonic acid {6-[4-(2-trifluoromethylbenzoyl)-piperazin-1-yl]pyridin-3-yl}amide;

Hexane-1-sulfonic acid {6-[4-(2-trifluoromethylbenzoyl)-piperazin-1-yl]pyridin-3-yl}amide;

Pentane-1-sulfonic acid {6-[4-(2-bromobenzoyl)piperazin-1-yl]pyridin-3-yl}amide;

Hexane-1-sulfonic acid {6-[4-(2,5-dichlorobenzoyl)-piperazin-1-yl]pyridin-3-yl}amide;

Pentane-1-sulfonic acid {6-[4-(2,5-dichlorobenzoyl)-piperazin-1-yl]pyridin-3-yl}amide;

Hexane-1-sulfonic acid {6-[4-(naphthalene-1-carbonyl)-piperazin-1-yl]pyridin-3-yl}amide;

Pentane-1-sulfonic acid {6-[4-(naphthalene-1-carbonyl)-piperazin-1-yl]pyridin-3-yl}amide; and

3-Phenylpropane-1-sulfonic acid {6-[4-(2-trifluoromethylbenzoyl)piperazin-1-yl]pyridin-3-yl}amide.

34. (Withdrawn) The compound of Claim 31 wherein:

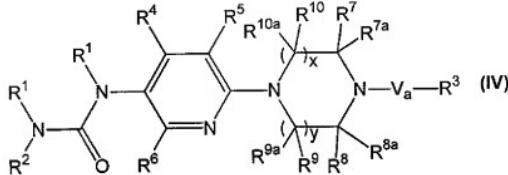
R² is C₄-C₁₂cycloalkylalkyl, C₇-C₁₉aralkyl, C₃-C₁₂heterocyclalkyl or C₃-C₁₂heteroarylalkyl;

R³ is naphthyl or phenyl, each optionally substituted by one or more substituents selected from the group consisting of halo, C₁-C₆alkyl, C₁-C₆trihaloalkyl and C₁-C₆trihaloalkoxy.

35. (Withdrawn) A method of treating a disease or condition mediated by stearoyl-CoA desaturase (SCD) in a mammal, wherein the method comprises administering to a mammal in need thereof a therapeutically effective amount of a compound of Claim 29.

36. (Withdrawn) A pharmaceutical composition comprising a pharmaceutically acceptable excipient and a therapeutically effective amount of a compound of Claim 29.

37. (Currently Amended) The compound of formula (IV):



wherein:

x and y are each independently 1;

V_a is -C(O)-, -C(S)-, -C(O)N(R¹), -C(S)N(R¹), -C(O)O-, -C(S)O-, -S(O)-(where t is 1 or 2) or -S(O)N(R¹)-(where t is 1 or 2);

each R¹ is independently selected from the group consisting of hydrogen, C₁-C₁₂alkyl, C₂-C₁₂hydroxyalkyl, C₄-C₁₂cycloalkylalkyl and C₇-C₁₉aralkyl;

R² is selected from the group consisting of C₁-C₁₂alkyl, C₂-C₁₂alkenyl, C₂-C₁₂hydroxyalkyl, C₂-C₁₂hydroxyalkenyl, C₃-C₁₂alkoxyalkyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂ heterocyclcyl, C₃-C₁₂heterocyclalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl;

or R² is a multi-ring structure having 2 to 4 rings wherein the rings are independently selected from the group consisting of cycloalkyl, heterocycl, aryl and heteroaryl, where some or all of the rings may be fused to each other;

R³ is phenyl or naphthalene selected from the group consisting of C₁-C₁₂alkyl, C₂-C₁₂alkenyl, C₂-C₁₂hydroxyalkyl, C₂-C₁₂hydroxyalkenyl, C₂-C₁₂alkoxyalkyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂heterocycl, C₃-C₁₂heterocyclalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl;

~~or R³ is a multi-ring structure having 2 to 4 rings wherein the rings are independently selected from the group consisting of cycloalkyl, heterocycl, aryl and heteroaryl and where some or all of the rings may be fused to each other;~~

R⁴, R⁵ and R⁶ are each independently selected from hydrogen, bromo, fluoro, chloro, methyl, methoxy, trifluoromethyl, cyano, nitro or -N(R¹³)₂;

R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰, and R^{10a} are each independently selected from hydrogen or C₁-C₃alkyl; and

each R¹³ is independently selected from hydrogen or C₁-C₆alkyl;

a stereoisomer, enantiomer or tautomer thereof, a pharmaceutically acceptable salt thereof, a pharmaceutical composition thereof or a prodrug thereof.

38. (Currently Amended) The compound of Claim 37 wherein:

x and y are each independently 1;

V_a is -C(O)-, -C(S)-, -C(O)N(R¹)-, -C(S)N(R¹)-, -C(O)O-, -S(O)- (where t is 1 or 2) or -S(O)N(R¹)- (where t is 1 or 2);

each R¹ is independently selected from the group consisting of hydrogen, C₁-C₁₂alkyl, C₂-C₁₂hydroxyalkyl, C₄-C₁₂cycloalkylalkyl and C₇-C₁₉aralkyl;

R² is selected from the group consisting of C₁-C₁₂alkyl, C₂-C₁₂alkenyl, C₂-C₁₂hydroxyalkyl, C₂-C₁₂hydroxyalkenyl, C₃-C₁₂alkoxyalkyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂ heterocycl, C₃-C₁₂heterocyclalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl;

R³ is phenyl or naphthalene selected from the group consisting of C₁-C₁₂alkyl, C₂-C₁₂alkenyl, C₂-C₁₂hydroxyalkyl, C₂-C₁₂hydroxyalkenyl, C₂-C₁₂alkoxyalkyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂heterocycl, C₃-C₁₂heterocyclalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl;

R⁴, R⁵ and R⁶ are each independently selected from hydrogen, bromo, fluoro, chloro, methyl, methoxy, trifluoromethyl, cyano, nitro or -N(R¹³)₂;

R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰, and R^{10a} are each independently selected from hydrogen or C₁-C₃alkyl; and

each R¹³ is independently selected from hydrogen or C₁-C₆alkyl.

39. (Currently Amended) The compound of Claim 38 wherein:

x and y are each 1;

V_a is -C(O)-;

each R¹ is independently hydrogen or C₁-C₆alkyl;

R² is selected from the group consisting of C₁-C₁₂alkyl, C₂-C₁₂alkenyl, C₂-C₁₂hydroxyalkyl, C₂-C₁₂hydroxyalkenyl, C₃-C₁₂alkoxyalkyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂ heterocyclyl, C₃-C₁₂heterocyclylalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl;

R³ is phenyl or naphthalene selected from the group consisting of C₃-C₁₂alkyl, C₃-C₁₂alkenyl, C₃-C₁₂hydroxyalkyl, C₃-C₁₂hydroxyalkenyl, C₃-C₁₂alkoxyalkyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂heterocyclyl, C₃-C₁₂heterocyclylalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl;

R⁴, R⁵ and R⁶ are each hydrogen;

R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰, and R^{10a} are each hydrogen; and

each R¹² is independently selected from hydrogen, C₁-C₆alkyl, C₃-C₆cycloalkyl, aryl or aralkyl.

40. (Currently Amended) The compound of Claim 39 wherein:

R² is C₁-C₁₂alkyl or C₇-C₁₂aralkyl optionally substituted by one or more substituents selected from the group consisting of halo, C₁-C₆alkyl, C₁-C₆trihaloalkyl and C₁-C₆trihaloalkoxy; and

R³ is phenyl or naphthalene selected from the group consisting of C₃-C₁₂cycloalkyl, aryl, C₃-C₁₂heterocyclyl or C₃-C₁₂heteroaryl.

41. (Withdrawn) The compound of Claim 40 wherein R³ is C₃-C₁₂cycloalkyl.

42. (Withdrawn) The compound of Claim 41 selected from the group consisting of the following:

1-[6-(4-Cyclohexanecarbonylpiperazin-1-yl)pyridin-3-yl]-3-pentylurea; and
1-[6-(4-Cyclopentanecarbonylpiperazin-1-yl)pyridin-3-yl]-3-pentylurea.

43. (Original) The compound of Claim 40 wherein R³ is phenyl optionally substituted by one or more substituents selected from the group consisting of halo, C₁-C₆alkyl, C₁-C₆trihaloalkyl and C₁-C₆trihaloalkoxy.

44. (Original) The compound of Claim 43 selected from the group consisting of the following:

1-Pentyl-3-[6-[4-(2-trifluoromethylbenzoyl)piperazin-1-yl]pyridin-3-yl]urea;
1-Butyl-3-[6-[4-(2-trifluoromethylbenzoyl)piperazin-1-yl]pyridin-3-yl]urea;
1-Phenethyl-3-[6-[4-(2-trifluoromethylbenzoyl)piperazin-1-yl]pyridin-3-yl]urea;
1-Benzyl-3-[6-[4-(2-trifluoromethylbenzoyl)piperazin-1-yl]pyridin-3-yl]urea; and
1-(4-Fluorobenzyl)-3-[6-[4-(2-trifluoromethylbenzoyl)-piperazin-1-yl]pyridin-3-yl]urea.

45. (Withdrawn) The compound of Claim 40 wherein R³ is piperidinyl optionally substituted by C₁-C₆alkyl or C₇-C₁₂aralkyl, wherein the C₇-C₁₂aralkyl group is optionally substituted by one or more substituents selected from the group consisting of halo, C₁-C₆alkyl, C₁-C₆trihaloalkyl and C₁-C₆trihaloalkoxy.

46. (Withdrawn) The compound of Claim 45, namely, 1-[6-[4-(1-Benzylpiperidine-4-carbonyl)piperazin-1-yl]pyridin-3-yl]-3-pentylurea.

47. (Withdrawn) The compound of Claim 40 wherein R³ is pyridinyl optionally substituted by one or more substituents selected from the group consisting of halo or C₁-C₆alkyl.

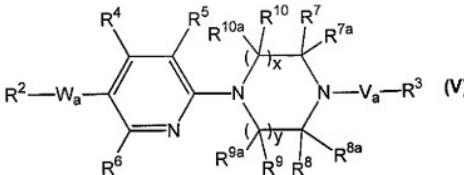
48. (Withdrawn) The compound of Claim 47 selected from the group consisting of the following:

1-Pentyl-3-[6-[4-(pyridine-2-carbonyl)piperazin-1-yl]pyridin-3-yl]urea; and
1-Pentyl-3-[6-[4-(pyridine-4-carbonyl)piperazin-1-yl]pyridin-3-yl]urea.

49. (Original) A method of treating a disease or condition mediated by stearoyl-CoA desaturase (SCD) in a mammal, wherein the method comprises administering to a mammal in need thereof a therapeutically effective amount of a compound of Claim 37.

50. (Original) A pharmaceutical composition comprising a pharmaceutically acceptable excipient and a therapeutically effective amount of a compound of Claim 37.

51. (Withdrawn) The compound of formula (V):



wherein:

x and y are each independently 1, 2 or 3;

W_a is $-\text{O}-$, $-\text{N}(\text{R}^1)-$ or $-\text{S}(\text{O})-$ (where t is 0, 1 or 2);

V_a is $-\text{C}(\text{O})-$, $-\text{C}(\text{S})-$, $-\text{C}(\text{O})\text{N}(\text{R}^1)-$, $-\text{C}(\text{S})\text{N}(\text{R}^1)-$, $-\text{C}(\text{O})\text{O}-$, $-\text{C}(\text{S})\text{O}-$, $-\text{S}(\text{O})-$ (where t is 1 or 2) or $-\text{S}(\text{O})_t\text{N}(\text{R}^1)-$ (where t is 1 or 2);

each R^1 is independently selected from the group consisting of hydrogen, $\text{C}_1\text{-C}_{12}\text{alkyl}$, $\text{C}_2\text{-C}_{12}\text{hydroxyalkyl}$, $\text{C}_4\text{-C}_{12}\text{cycloalkylalkyl}$ and $\text{C}_7\text{-C}_{19}\text{aralkyl}$;

R^2 is selected from the group consisting of $\text{C}_1\text{-C}_{12}\text{alkyl}$, $\text{C}_2\text{-C}_{12}\text{alkenyl}$, $\text{C}_2\text{-C}_{12}\text{hydroxyalkyl}$, $\text{C}_2\text{-C}_{12}\text{hydroxyalkenyl}$, $\text{C}_3\text{-C}_{12}\text{alkoxyalkyl}$, $\text{C}_3\text{-C}_{12}\text{cycloalkyl}$, $\text{C}_4\text{-C}_{12}\text{cycloalkylalkyl}$, aryl, $\text{C}_7\text{-C}_{19}\text{aralkyl}$, $\text{C}_3\text{-C}_{12}$ heterocyclyl, $\text{C}_3\text{-C}_{12}$ heterocyclylalkyl, $\text{C}_1\text{-C}_{12}$ heteroaryl and $\text{C}_3\text{-C}_{12}$ heteroarylalkyl;

or R^2 is a multi-ring structure having 2 to 4 rings wherein the rings are independently selected from the group consisting of cycloalkyl, heterocyclyl, aryl and heteroaryl, where some or all of the rings may be fused to each other;

R^3 is selected from the group consisting of $\text{C}_1\text{-C}_{12}\text{alkyl}$, $\text{C}_2\text{-C}_{12}\text{alkenyl}$, $\text{C}_2\text{-C}_{12}\text{hydroxyalkyl}$, $\text{C}_2\text{-C}_{12}\text{hydroxyalkenyl}$, $\text{C}_2\text{-C}_{12}\text{alkoxyalkyl}$, $\text{C}_3\text{-C}_{12}\text{cycloalkyl}$, $\text{C}_4\text{-C}_{12}\text{cycloalkylalkyl}$, aryl, $\text{C}_7\text{-C}_{19}\text{aralkyl}$, $\text{C}_3\text{-C}_{12}$ heterocyclyl, $\text{C}_3\text{-C}_{12}$ heterocyclylalkyl,

C₁-C₁₂heteroaryl and C₃-C₁₂heteroaryalkyl;

or R³ is a multi-ring structure having 2 to 4 rings wherein the rings are independently selected from the group consisting of cycloalkyl, heterocyclil, aryl and heteroaryl and where some or all of the rings may be fused to each other;

R⁴, R⁵ and R⁶ are each independently selected from hydrogen, bromo, fluoro, chloro, methyl, methoxy, trifluoromethyl, cyano, nitro or -N(R¹³)₂;

R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰, and R^{10a} are each independently selected from hydrogen or C₁-C₃alkyl;

or R⁷ and R^{7a} together, or R⁸ and R^{8a} together, or R⁹ and R^{9a} together, or R¹⁰ and R^{10a} together are an exo-group, provided that when V_a is -C(O)-, R⁷ and R^{7a} together or R⁸ and R^{8a} together do not form an exo-group, while the remaining R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰, and R^{10a} are each independently selected from hydrogen or C₁-C₆alkyl;

or one of R¹⁰, R^{10a}, R⁷, and R^{7a} together with one of R⁸, R^{8a}, R⁹ and R^{9a} form an alkylene-bridge, while the remaining R¹⁰, R^{10a}, R⁷, R^{7a}, R⁸, R^{8a}, R⁹, and R^{9a} are each independently selected from hydrogen or C₁-C₆alkyl; and

each R¹³ is independently selected from hydrogen or C₁-C₆alkyl;

a stereoisomer, enantiomer or tautomer thereof, a pharmaceutically acceptable salt thereof, a pharmaceutical composition thereof or a prodrug thereof.

52. (Withdrawn) The compound of Claim 51 wherein:

x and y are each independently 1, 2 or 3;

W_a is -O-, -N(R¹)- or -S(O)_t (where t is 0, 1 or 2);

V_a is -C(O)-, -C(S)-, -C(O)N(R¹)-, -C(S)N(R¹)-, -C(O)O-, -S(O)_t (where t is 1 or 2) or -S(O)N(R¹)- (where t is 1 or 2);

each R¹ is independently selected from the group consisting of hydrogen, C₁-C₁₂alkyl, C₂-C₁₂hydroxyalkyl, C₄-C₁₂cycloalkylalkyl and C₇-C₁₉aralkyl;

R² is selected from the group consisting of C₁-C₁₂alkyl, C₂-C₁₂alkenyl, C₂-C₁₂hydroxyalkyl, C₂-C₁₂hydroxyalkenyl, C₃-C₁₂alkoxyalkyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂ heterocyclil, C₃-C₁₂heterocyclilalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroaryalkyl;

R³ is selected from the group consisting of C₁-C₁₂alkyl, C₂-C₁₂alkenyl, C₂-C₁₂hydroxyalkyl, C₂-C₁₂hydroxyalkenyl, C₂-C₁₂alkoxyalkyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂heterocyclil, C₃-C₁₂heterocyclilalkyl,

C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl;

R⁴, R⁵ and R⁶ are each independently selected from hydrogen, bromo, fluoro, chloro, methyl, methoxy, trifluoromethyl, cyano, nitro or -N(R¹³)₂;

R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰, and R^{10a} are each independently selected from hydrogen or C₁-C₃alkyl; and

each R¹³ is independently selected from hydrogen or C₁-C₆alkyl.

53. (Withdrawn) The compound of Claim 52 wherein:

x and y are each 1;

W_a is -O-;

V_a is -C(O)- or -C(S)-;

R² is selected from the group consisting of C₁-C₁₂alkyl, C₂-C₁₂alkenyl, C₂-C₁₂hydroxyalkyl, C₂-C₁₂hydroxyalkenyl, C₃-C₁₂alkoxalkyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂ heterocyclyl, C₃-C₁₂heterocyclalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl;

R³ is selected from the group consisting of C₃-C₁₂alkyl, C₃-C₁₂alkenyl, C₃-C₁₂hydroxyalkyl, C₃-C₁₂hydroxyalkenyl, C₃-C₁₂alkoxy, C₃-C₁₂alkoxalkyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂heterocyclyl, C₃-C₁₂heterocyclalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl;

R⁴, R⁵ and R⁶ are each hydrogen; and

R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰, and R^{10a} are each hydrogen.

54. (Withdrawn) The compound of Claim 53 wherein:

V_a is -C(O)-;

R² is selected from the group consisting of C₁-C₁₂alkyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂ heterocyclyl, C₃-C₁₂heterocyclalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl; and

R³ is selected from the group consisting of C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂heterocyclyl, C₃-C₁₂heterocyclalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl.

55. (Withdrawn) The compound of Claim 52 wherein:

x and y are each 1;

W_a is -N(R¹)-;

V_a is -C(O)- or -C(S)-;

R¹ is hydrogen or C₁-C₆alkyl;

R² is selected from the group consisting of C₁-C₁₂alkyl, C₂-C₁₂alkenyl, C₂-C₁₂hydroxyalkyl, C₂-C₁₂hydroxyalkenyl, C₃-C₁₂alkoxyalkyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂heterocyclyl, C₃-C₁₂heterocyclylalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl;

R³ is selected from the group consisting of C₃-C₁₂alkyl, C₃-C₁₂alkenyl, C₃-C₁₂hydroxyalkyl, C₃-C₁₂hydroxyalkenyl, C₃-C₁₂alkoxy, C₃-C₁₂alkoxyalkyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂heterocyclyl, C₃-C₁₂heterocyclylalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl;

R⁴, R⁵ and R⁶ are each hydrogen; and

R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰, and R^{10a} are each hydrogen.

56. (Withdrawn) The compound of Claim 55 wherein:

V_a is -C(O)-;

R² is selected from the group consisting of C₁-C₁₂alkyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂ heterocyclyl, C₃-C₁₂heterocyclylalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl; and

R³ is selected from the group consisting of C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂heterocyclyl, C₃-C₁₂heterocyclylalkyl, C₁-C₁₂ heteroaryl and C₃-C₁₂heteroarylalkyl.

57. (Withdrawn) The compound of Claim 52 wherein:

x and y are each 1;

W_a is -S(O)_t- (where t is 0, 1 or 2);

V_a is -C(O)- or -C(S)-;

R² is selected from the group consisting of C₁-C₁₂alkyl, C₂-C₁₂alkenyl, C₂-C₁₂hydroxyalkyl, C₂-C₁₂hydroxyalkenyl, C₃-C₁₂alkoxyalkyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂ heterocyclyl, C₃-C₁₂heterocyclylalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl;

R^3 is selected from the group consisting of C_3 - C_{12} alkyl, C_3 - C_{12} alkenyl, C_3 - C_{12} hydroxyalkyl, C_3 - C_{12} hydroxyalkenyl, C_3 - C_{12} alkoxy, C_3 - C_{12} alkoxyalkyl, C_3 - C_{12} cycloalkyl, C_4 - C_{12} cycloalkylalkyl, aryl, C_7 - C_{19} aralkyl, C_3 - C_{12} heterocyclyl, C_3 - C_{12} heterocyclylalkyl, C_1 - C_{12} heteroaryl and C_3 - C_{12} heteroarylalkyl;

R^4 , R^5 and R^6 are each hydrogen; and

R^7 , R^{7a} , R^8 , R^{8a} , R^9 , R^{9a} , R^{10} , and R^{10a} are each hydrogen.

58. (Withdrawn) The compound of Claim 57 wherein:

V_a is $-C(O)-$;

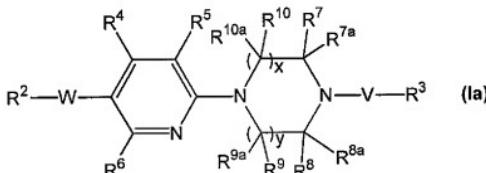
R^2 is selected from the group consisting of C_1 - C_{12} alkyl, C_3 - C_{12} cycloalkyl, C_4 - C_{12} cycloalkylalkyl, aryl, C_7 - C_{19} aralkyl, C_3 - C_{12} heterocyclyl, C_3 - C_{12} heterocyclylalkyl, C_1 - C_{12} heteroaryl and C_3 - C_{12} heteroarylalkyl; and

R^3 is selected from the group consisting of C_3 - C_{12} cycloalkyl, C_4 - C_{12} cycloalkylalkyl, aryl, C_7 - C_{19} aralkyl, C_3 - C_{12} heterocyclyl, C_3 - C_{12} heterocyclylalkyl, C_1 - C_{12} heteroaryl and C_3 - C_{12} heteroarylalkyl.

59. (Withdrawn) A method of treating a disease or condition mediated by stearoyl-CoA desaturase (SCD) in a mammal, wherein the method comprises administering to a mammal in need thereof a therapeutically effective amount of a compound of Claim 51.

60. (Withdrawn) A pharmaceutical composition comprising a pharmaceutically acceptable excipient and a therapeutically effective amount of a compound of Claim 51.

61. (Withdrawn) A compound of formula (Ia):



wherein:

x and y are each independently 1, 2 or 3;

W is $-N(R^1)S(O)_t$ (where t is 1 or 2);

V is $-C(O)$, $-C(S)$, $-C(O)N(R^1)$, $-C(S)N(R^1)$, $-C(O)O$, $-C(S)O$, $-S(O)_t$ (where t is 1 or 2), $-S(O)N(R^1)$ (where t is 1 or 2) or $-C(R^{11})H$;

each R¹ is independently selected from the group consisting of hydrogen,

C_1-C_{12} alkyl, C_2-C_{12} hydroxyalkyl, C_4-C_{12} cycloalkylalkyl and C_7-C_{19} aralkyl;

R² is selected from the group consisting of C_1-C_{12} alkyl, C_2-C_{12} alkenyl,

C_2-C_{12} hydroxyalkyl, C_2-C_{12} hydroxyalkenyl, C_2-C_{12} alkoxyalkyl, C_3-C_{12} cycloalkyl,

C_4-C_{12} cycloalkylalkyl, aryl, C_7-C_{19} aralkyl, C_3-C_{12} heterocycl, C_3-C_{12} heterocyclalkyl,

C_1-C_{12} heteroaryl, and C_3-C_{12} heteroarylalkyl;

or R² is a multi-ring structure having 2 to 4 rings wherein the rings are independently selected from the group consisting of cycloalkyl, heterocycl, aryl and heteroaryl and where some or all of the rings may be fused to each other;

R³ is selected from the group consisting of C_1-C_{12} alkyl, C_2-C_{12} alkenyl,

C_2-C_{12} hydroxyalkyl, C_2-C_{12} hydroxyalkenyl, C_2-C_{12} alkoxyalkyl, C_3-C_{12} cycloalkyl,

C_4-C_{12} cycloalkylalkyl, aryl, C_7-C_{19} aralkyl, C_3-C_{12} heterocycl, C_3-C_{12} heterocyclalkyl,

C_1-C_{12} heteroaryl and C_3-C_{12} heteroarylalkyl;

or R³ is a multi-ring structure having 2 to 4 rings wherein the rings are

independently selected from the group consisting of cycloalkyl, heterocycl, aryl and heteroaryl and where some or all of the rings may be fused to each other;

R⁴, R⁵ and R⁶ are each independently selected from hydrogen, bromo, fluoro, chloro, methyl, methoxy, trifluoromethyl, cyano, nitro or $-N(R^{13})_2$;

R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰, and R^{10a} are each independently selected from hydrogen or C_1-C_3 alkyl;

or R⁷ and R^{7a} together, or R⁸ and R^{8a} together, or R⁹ and R^{9a} together, or R¹⁰ and

R^{10a} together are an exo group, provided that when V is $-C(O)$, R⁷ and R^{7a} together or R⁸ and R^{8a} together do not form an exo group, while the remaining R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰, and R^{10a} are each independently selected from hydrogen or C_1-C_3 alkyl;

or one of R¹⁰, R^{10a}, R⁷, and R^{7a} together with one of R⁶, R^{8a}, R⁹ and R^{9a} form an alkylene bridge, while the remaining R¹⁰, R^{10a}, R⁷, R^{7a}, R⁸, R^{8a}, R⁹, and R^{9a} are each independently selected from hydrogen or C_1-C_3 alkyl;

R¹¹ is hydrogen or C_1-C_3 alkyl; and

each R¹³ is independently selected from hydrogen or C_1-C_6 alkyl;

a stereoisomer, enantiomer or tautomer thereof, a pharmaceutically acceptable

salt thereof, a pharmaceutical composition thereof or a prodrug thereof.

62. (Withdrawn) The compound of Claim 61 wherein:

x and y are each independently 1, 2 or 3;

V is -C(O)- or -C(S)-;

R¹ is hydrogen, C₁-C₁₂alkyl, C₂-C₁₂hydroxyalkyl, C₄-C₁₂cycloalkylalkyl and C₇-C₁₉aralkyl;

R² is selected from the group consisting of C₁-C₁₂alkyl, C₂-C₁₂alkenyl, C₂-C₁₂hydroxyalkyl, C₂-C₁₂hydroxyalkenyl, C₂-C₁₂alkoxyalkyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂heterocycl, C₃-C₁₂heterocyclalkyl, C₁-C₁₂heteroaryl, and C₃-C₁₂heteroarylalkyl;

R³ is selected from the group consisting of C₁-C₁₂alkyl, C₂-C₁₂alkenyl, C₂-C₁₂hydroxyalkyl, C₂-C₁₂hydroxyalkenyl, C₁-C₁₂alkoxy, C₂-C₁₂alkoxyalkyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, aryl, C₇-C₁₉aralkyl, C₃-C₁₂heterocycl, C₃-C₁₂heterocyclalkyl, C₁-C₁₂heteroaryl and C₃-C₁₂heteroarylalkyl;

R⁴, R⁵ and R⁶ are each independently selected from hydrogen, bromo, fluoro, chloro, methyl, methoxy, trifluoromethyl, cyano, nitro or -N(R¹³)₂;

R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰, and R^{10a} are each independently selected from hydrogen or C₁-C₃alkyl; and

each R¹³ is independently selected from hydrogen or C₁-C₆alkyl.

63. (Withdrawn) The compound of Claim 62 wherein:

x and y are each 1;

V is -C(O)-;

R¹ is hydrogen, C₁-C₁₂alkyl or C₄-C₁₂cycloalkylalkyl;

R² is selected from the group consisting of C₁-C₁₂alkyl, C₂-C₁₂alkenyl, C₃-C₁₂cycloalkyl, C₄-C₁₂cycloalkylalkyl, C₇-C₁₉aralkyl, C₃-C₁₂heterocyclalkyl and C₃-C₁₂heteroarylalkyl;

R³ is aryl optionally substituted by one or more substituents selected from the group consisting of halo, cyano, nitro, hydroxy, C₁-C₆alkyl, C₁-C₆trihaloalkyl, C₁-C₆trihaloalkoxy, C₁-C₆alkylsulfonyl, -N(R¹²)₂, -OC(O)R¹², -C(O)OR¹², -S(O)₂N(R¹²)₂, cycloalkyl, heterocycl, heteroaryl and heteroarylalkyl;

R⁴, R⁵ and R⁶ are each independently selected from hydrogen, bromo, fluoro, chloro, methyl, methoxy, trifluoromethyl, cyano, nitro or -N(R¹³)₂;

R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰, and R^{10a} are each independently selected from hydrogen or C₁-C₃alkyl; and

each R¹³ is independently selected from hydrogen or C₁-C₆alkyl.

64. (Withdrawn) The compound of Claim 63 wherein:

x and y are each 1;

V is -C(O)-;

R¹ is hydrogen, C₁-C₁₂alkyl or C₄-C₁₂cycloalkylalkyl;

R² is C₁-C₁₂alkyl or C₂-C₁₂alkenyl;

R³ is phenyl optionally substituted by one or more substituents selected from the group consisting of halo, cyano, nitro, hydroxy, C₁-C₆alkyl, C₁-C₆trihaloalkyl, C₁-C₆trihaloalkoxy, C₁-C₆alkylsulfonyl, -N(R¹²)₂, -OC(O)R¹², -C(O)OR¹² and -S(O)₂N(R¹²)₂;

R⁴, R⁵ and R⁶ are each independently selected from hydrogen, bromo, fluoro or chloro; and

R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰ and R^{10a} are each hydrogen.

65. (Withdrawn) The compound of Claim 63 wherein:

x and y are each 1;

V is -C(O)-;

R¹ is hydrogen, C₁-C₁₂alkyl or C₄-C₁₂cycloalkylalkyl;

R² is C₃-C₁₂cycloalkyl or C₄-C₁₂cycloalkylalkyl;

R³ is phenyl optionally substituted by one or more substituents selected from the group consisting of halo, cyano, nitro, hydroxy, C₁-C₆alkyl, C₁-C₆trihaloalkyl, C₁-C₆trihaloalkoxy, C₁-C₆alkylsulfonyl, -N(R¹²)₂, -OC(O)R¹², -C(O)OR¹² and -S(O)₂N(R¹²)₂;

R⁴, R⁵ and R⁶ are each independently selected from hydrogen, bromo, fluoro or chloro; and

R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰ and R^{10a} are each hydrogen.

66. (Withdrawn) The compound of Claim 65 wherein:

R² is C₄-C₁₂cycloalkylalkyl;

R³ is phenyl optionally substituted by one or more substituents selected from halo, C₁-C₆alkyl, C₁-C₆trihaloalkyl and C₁-C₆trihaloalkoxy;

R⁴ and R⁶ are both hydrogen; and

R⁵ is hydrogen or bromo.

67. (Withdrawn) The compound of Claim 66 selected from the group consisting of the following:

5-Bromo-6-[4-(5-fluoro-2-trifluoromethylbenzoyl)piperazin-1-yl]pyridine-3-sulfonic acid (2-cyclopropylethyl)amide; and

6-[4-(5-fluoro-2-trifluoromethylbenzoyl)piperazin-1-yl]pyridine-3-sulfonic acid (2-cyclopropylethyl)amide.

68. (Withdrawn) The compound of Claim 63 wherein:

x and y are each 1;

V is -C(O)-;

R¹ is hydrogen, C₁-C₁₂alkyl or C₄-C₁₂cycloalkylalkyl;

R² is C₇-C₁₀aralkyl, C₃-C₁₂heterocyclalkyl or C₃-C₁₂heteroarylalkyl;

R³ is phenyl optionally substituted by one or more substituents selected from the group consisting of halo, cyano, nitro, hydroxy, C₁-C₆alkyl, C₁-C₆trihaloalkyl, C₁-C₆trihaloalkoxy, C₁-C₆alkylsulfonyl, -N(R¹²)₂, -OC(O)R¹², -C(O)OR¹² and -S(O)₂N(R¹²)₂;

R⁴, R⁵ and R⁶ are each independently selected from hydrogen, bromo, fluoro or chloro; and

R⁷, R^{7a}, R⁸, R^{8a}, R⁹, R^{9a}, R¹⁰, and R^{10a} are each hydrogen.

69. (Withdrawn) A method of treating a disease or condition mediated by stearoyl-CoA desaturase (SCD) in a mammal, wherein the method comprises administering to a mammal in need thereof a therapeutically effective amount of a compound of Claim 61.

70. (Withdrawn) A pharmaceutical composition comprising a pharmaceutically acceptable excipient and a therapeutically effective amount of a compound of Claim 61.